

**For each question, you need to find the answer and show your work. Each problem is worth 3 points: one for the correct answer, and two for showing your work. For some problems, you may just need to write out how you know you have the correct answer.**

**Find the length and midpoints of the line segments with the given endpoints.**

1.  $(0, -3), (0, 9)$

2.  $(5, -2), (12, -2)$

3.  $(-5, -4), (-5, 7)$

4.  $(2, 6), (-3, 8)$

5.  $(-2, 5), (5, -2)$

6.  $(9, 7), (1, -3)$

7.  $(-4, 6), (15, 9)$

8.  $(-10, -1), (15, 5)$

9.  $(27, -6), (32, 4)$

10.  $(-9, 5), (-4, 10)$

**Open-Ended Question: Make sure as you answer the open-ended question that you show your work AND explain how you know you are doing the correct work. YOU MUST EXPLAIN WHAT YOU ARE DOING!!!**

A circle has its center at the point with coordinates  $(-3, 4)$ . HINT: Drawing a sketch for this problem might be quite helpful.

A. If a point on the circle is at  $(2, 13)$ , find the length of the radius of the circle. Round your answer to the nearest tenth, if necessary.

B. Find the length of the diameter of the circle. Round your answer to the nearest tenth, if necessary.